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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,975	10/22/2001	Haruhiko Mori	018976-209	8773

7590 09/26/2006

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EXAMINER

SELF, SHELLEY M

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

21

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/982,975		MORI, HARUHIKO	
	<b>Examiner</b>		<b>Art Unit</b>	
	Shelley Self		3725	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/12/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 11, 2006 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

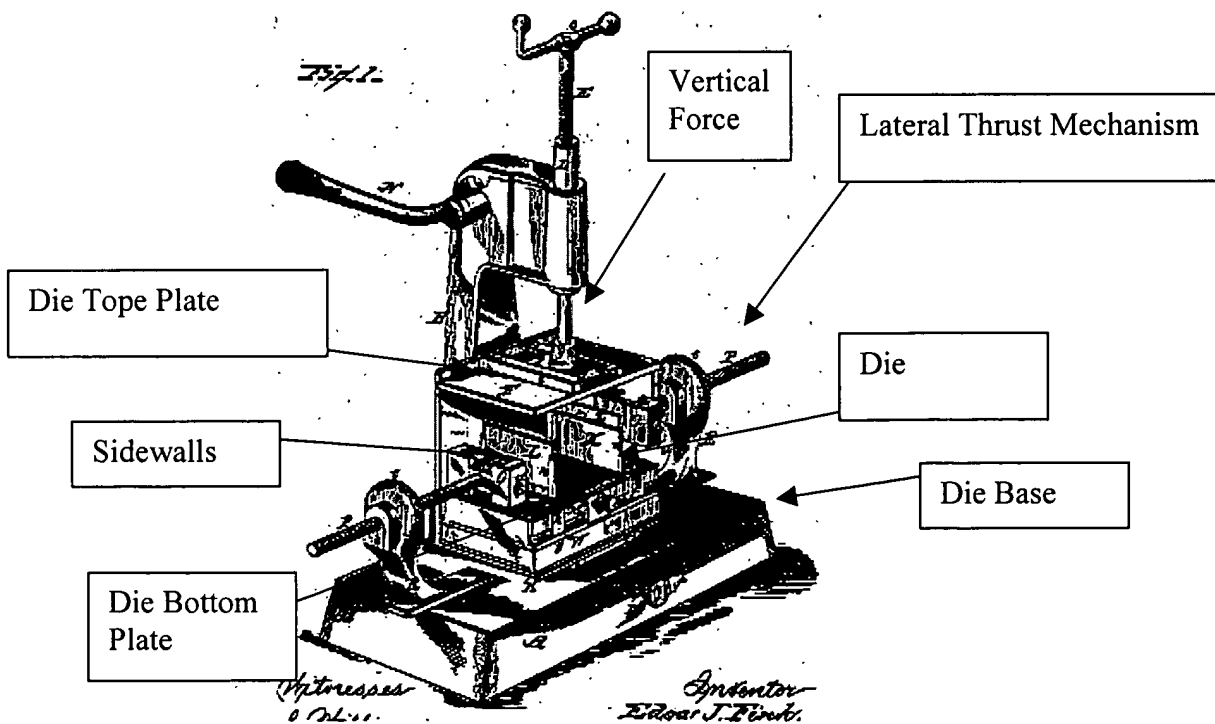
Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink (529,254) in view of Mori et al. (5,370,760). With regard to claim 14, Fink discloses a method for a stacked layer structure comprising the steps of laterally holding sidewalls of a die (fig. 1) at a predetermined position on a die base using a plurality of thrust mechanism, wherein the die has a bottom plate and the sidewalls forming a recess for receiving the layered structure; and vertically pressing the layered structure in the recess between the bottom plate and a top die and while applying lateral force via the plurality of thrust mechanism on outer faces of the sidewalls

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in horizontal directions toward the recess. Fink does not disclose the use of a ceramic-stacked layer structure.

Mori et al teaches in a closely related art pressing of a ceramic stacked layered structure, wherein the ceramic structure is held within a die recess, the die having a die bottom, sidewalls and a vertical top plate, wherein the ceramic material is subjected to vertical forces and contained within the die via the sidewalls.

Because the references are from a similar art, it would have been obvious at the time of the invention to one having ordinary skill in the art to construct Fink so as to press a ceramic stacked layered structures, or any stacked layered structure, as it is taught by Mori that ceramic stacked layered structures are efficiently compressed via vertical forces and at least lateral compressive forces.



With regard to claim 15, Fink teaches the thrust members attached to the die base (fig. 1).

With regard to claim 16, Fink teaches wherein the bottom plate and sidewalls are discrete components (figs. 1).

With regard to claim 17, Fink does not disclose the bottom plate and sidewalls to be integral. It would have been obvious at the time of the invention to one having ordinary skill in the art to construct Fink such that the bottom plate and sidewalls were integral because forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. See *Howard v. Detroit Stove Works*, 150 U.S. 164.

With regard to claim 18, Fink does not disclose placing the stacked layer structure into the recess in the die and transporting the die with the stacked layer structure to the die base. Mori teaches the die and die base to be separable. Mori teaches this construction so as to efficiently place the ceramic material in the die and then move the die to the die base as to facilitate efficiently pressing of the ceramic material. Because the references are from a similar art and deal with a similar problem, i.e., pressing a stacked structure it would have been obvious at the time of the invention to construct Fink such that the die and die base were separable so as to place the stacked material/structure within the die and then transport the die to the die base for efficient pressing of the stacked material as taught by Mori.

With regard to claim 19, Fink does not disclose wherein said plurality of thrust mechanisms comprises four-thrust mechanisms. It would have been obvious at the time of the invention to one having ordinary skill in the art to construct Fink having four thrust mechanism because mere duplication of essential working parts of a device involves only routine skill in the art. See *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ

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With regard to claim 20, Fink discloses the recess between the bottom plate and the top die and the lateral force is applied via the plurality of thrust mechanisms (fig. 1) on outer faces of the sidewalls in directions toward the recess simultaneously.

With regard to claim 21, Fink discloses a step (k) and sidewalls (K) fitted to the step.

### ***Response to Arguments***

Applicant's arguments filed June 9, 2006 have been carefully, however the remarks rendered moot in view of the new ground(s) of rejection noted above. Further Examiner notes the analogoungness of prior art reference Fink and Mori et al., in that both references are concerned with pressing a stacked layered material within a die have lateral side walls and a bottom plate.

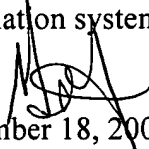
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelley Self whose telephone number is 571-272-4524. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SSelf   
September 18, 2006